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Elmo Leather AB  
512 81 SVENLJUNGA

## **Ignitability of upholstered furniture according to IMO Resolution A.652(16)**

(1 appendix)

### **Product**

Silver coloured cover material called "Elmotreasure". Semi-Aniline leather with nominal thickness 1.1 - 1.3 mm. Lightly pigmented finish, chrome-free tanned leather from Scandinavian cattle hide. The cover was tested in combination with non flame retardant standard polyether foam with nominal density 21 kg/m<sup>3</sup>.

### **Manufacturer**

Cover material: Elmo Leather AB, Svenljunga, Sweden.  
Polyether foam: Recticel AB, Gislaved, Sweden.

### **Purpose of test**

Basis for technical fire classification.

### **Sampling**

The sample was delivered by the client. It is not known to SP Fire Technology if the product received is representative of the mean production characteristics.

The sample was received on May 16, 2008 at SP Fire Technology.

### **Test results**

The upholstery combination was tested with cigarette and match flame equivalent as ignition sources. The ignition sources were applied in a position along the junction between seat and back. Special care was taken to note any progressive smouldering and/or flaming combustion in the combination.

The test results are given in appendix 1.

The test results relate only to the ignitability of the combination of upholstery composites under the particular conditions of the test; they are not intended as a means of assessing the full potential fire hazard of the materials or products in use.

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## Criteria

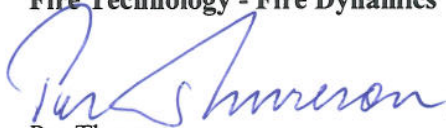
In the test with smouldering cigarette the combination of cover and foam should not ignite and burn with open flame, or generate progressive smouldering within one hour after that the cigarette was applied.

In the test with gas flame the combination of cover and foam should not ignite and burn with open flame during more than 120 seconds after the removal of the ignition source, or generate progressive smouldering within one hour after that the gas flame was applied.

## Assessment

The tested furniture upholstery combination, consisting of cover called "Elmotreasure", together with standard polyether foam with nominal density  $21 \text{ kg/m}^3$ , meets the technical fire requirements according to IMO Resolution A.652(16).

## SP Technical Research Institute of Sweden Fire Technology - Fire Dynamics



Per Thureson  
Technical Manager



Ida Larsson  
Technical Officer

## Appendix

### 1 Test results

Appendix 1

**Test results - IMO Resolution A.652(16), 1989**

**Tested product**

Silver coloured cover material called "Elmotreasure". Semi-Aniline leather with nominal thickness 1.1 - 1.3 mm. Lightly pigmented finish, chrome-free tanned leather from Scandinavian cattle hide. The cover was tested in combination with non flame retardant standard polyether foam with nominal density 21 kg/m<sup>3</sup>.

**Observations, ignition source cigarette**

**Table 1. Observations during the cigarette tests.**

Test no	1	2
The cigarette was applied in a position along the junction between seat and back, min:s	00:00	00:00
Cover ignited, min:s	-*	-*
Filling ignited, min:s	-*	-*
The cigarette died out, min:s	33:45	34:53
Flames in the cover died out, min:s	-	-
Flames in the filling died out, min:s	-	-
The flames were extinguished, min:s	-	-
The test was finished, min:s	60:00	60:00

\* Ignition of the materials was not observed.

**Observations after the fire test**

No progressive smouldering and/or flaming occurred within the 60 minute test time.

Appendix 1

**Observations, ignition source small flame**

**Table 2. Observations during the match flame tests.**

	Test no 1	Test no 2
The ignition source was applied in a position along the junction between seat and back, min:s	00:00	00:00
Cover ignited, min:s	-*	-*
Filling ignited, min:s	-*	-*
The ignition source was removed, min:s	00:20	00:20
Flames in the cover died out, min:s	-	-
Flames in the filling died out, min:s	-	-
Flames in the cover was extinguished, min:s	-	-
The test was finished, min:s	60:00	60:00

\* Ignition of the materials was not observed.

**Observations after the fire test**

No progressive smouldering and/or flaming occurred within the 60 minute test time.

**Pre-treatment**

None.

**Measure data of test sample**

Thickness, cover 1.2 – 1.5 mm.  
Area weight, cover 610 - 710 g/m<sup>2</sup>.

**Conditioning**

16 h at temperature 23 ± 2 °C and relative humidity (50 ± 5) %.

**Date of test**

June 10, 2008.